Guide to:
Writing an expression

maths Links

Explanation:

An algebraic **expression** uses letters to stand for unknown numbers (and has no equals sign). Translate key words into algebra: "4 more than x" is $x + 4$, "5 less than x" is $x - 5$, "3 times x" is $3x$, and "half of x" is $\frac{x}{2}$.

If you are unsure which operation to use with a letter, test it with a simple number first to see what calculation you do, then replace the number with the letter. Always check that money or length units match before forming the expression.

Example 1: Ben is x years old. Alice is 4 years older than Ben. Dan is 3 times as old as Ben. Write a simplified expression for the **sum of all three ages**.

Solution:

- **Ben:** x • **Alice:** $x + 4$ • **Dan:** $3x$
- Add all three ages together:
  $x + (x + 4) + 3x$
- Collect like terms → **Answer: $5x + 4$**

Example 2: A tea costs t pence, a coffee costs c pence, and a cake costs **£2.50**. Write an expression in **pence** for the total cost of 3 teas, 2 coffees, and 1 cake.

Solution:

- Convert £2.50 into pence first: £2.50 = **250p**
- 3 teas = $3t$ pence; 2 coffees = $2c$ pence
- Add the items together in pence:

Answer: $3t + 2c + 250$

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